

ABSTRACT

Processing is performed during fabrication of a strained silicon NMOS device to create point defects in silicon germanium portions of source regions, and optionally of drain regions, prior to activation of source and drain region dopants. The point defects retard diffusion of the n-type dopants in the silicon germanium material, effectively lengthening the duration of the diffusivity transient region and resulting in lower overall dopant diffusivity during activation.